

**Amendments to the Claims:**

A clean version of the entire set of pending claims is submitted herewith per 37 CFR 1.121(c)(3). This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently Amended) ~~An electronic circuit topology (1)~~ A circuit for driving a  
predominantly capacitive load, the circuit comprising: (2), ~~where a pulsed electrical~~  
~~power supply is used, with~~  
~~\_\_\_\_\_ a primary circuit with several components;~~  
~~\_\_\_\_\_ a secondary circuit with or connected to [[a]] the predominantly capacitive load;~~  
~~(2), and~~  
~~\_\_\_\_\_ a transformer device (4) with a primary side (TX1a) and a secondary side~~  
~~(TX1b), connecting the primary circuit with the secondary circuit,~~  
~~\_\_\_\_\_ wherein the primary circuit comprises: components comprise:~~  
~~\_\_\_\_\_ a source device (3) supplying power via the transformer device (4) for~~  
~~operating the predominantly capacitive load, (2),~~  
~~\_\_\_\_\_ a drain device (5) for absorbing at least a part of said power, which is~~  
~~reflected back from the predominantly capacitive load (2) during operation, and~~  
~~\_\_\_\_\_ a switching device (6) switch for switching a current on the primary side~~  
~~of the transformer device, and~~  
~~\_\_\_\_\_ a periodic pulse generator connected to the switch and configured to~~  
~~apply a series of periodic pulses to the switch for periodically turning on the switch,~~  
~~[[ - ]]~~  
~~\_\_\_\_\_ wherein the transformer device (4) is of a transformer type with a gap for~~  
~~transforming an input voltage-current-signal on the primary side (TX1a) to a~~  
~~suitable an output voltage-current-signal for supplying the predominantly capacitive~~  
~~load (2) on the secondary side (TX1b),~~  
~~\_\_\_\_\_ wherein the source device (3) is in serial connection with the transformer~~

device (4), the drain device (5), and the switching device (6), and whereby  
wherein the transformer device (4) being connected to the predominantly  
capacitive load (2) comprises the predominantly capacitive load (2) comprises means  
for functioning as forming a resonant tank circuit with the predominantly capacitive  
load, as a transformer device (4) in forward mode, and as a transformer device (4) in  
flyback mode, so that a single ended forward flyback circuit for driving predominantly  
capacitive loads (2) with pulse shaped wave forms is achieved.

2. (Currently Amended) ~~Electronic circuit topology (1) according to~~ The circuit  
of claim 1, wherein the means for forming the resonant tank circuit comprises at least  
one transformer unit (TX1) selected from the group of real transformers and at least  
one second inductive unit (L2) on the secondary side (TX1b), whereby the second  
inductive unit (L2) can be represented by the a leakage induction of the real  
transformer, so that a resonant tank circuit is achieved.

3-5. (Canceled)

6. (Currently Amended) ~~Electronic circuit topology (1) according to claim 1, An~~  
for driving a predominantly capacitive load, where a pulsed electrical power supply is  
used, with:

a primary circuit with several components,  
a secondary circuit with or connected to a predominantly capacitive load, and  
a transformer device with a primary side and a secondary side, connecting the  
primary circuit with the secondary circuit, the primary circuit components comprise:  
a source device supplying power via the transformer device for  
operating the predominantly capacitive load  
a drain device for absorbing at least a part of said power, which is  
reflected back from the predominantly capacitive load during operation, and  
a switching device for switching a current on the primary side,  
wherein the transformer device is of a transformer type with a gap for

transforming an input voltage-current-signal on the primary side to a suitable output voltage-current-signal for supplying the predominantly capacitive load on the secondary side,

wherein the source device is in serial connection with the transformer device, the drain device, and the switching device,

whereby the transformer device being connected to the predominantly capacitive load comprises the predominantly capacitive load comprises means for functioning as a resonant tank circuit, as a transformer device in forward mode, and as a transformer device in flyback mode, so that a single-ended forward-flyback circuit for driving predominantly capacitive loads with pulse-shaped wave forms is achieved, and

wherein the drain device (5) comprises a power absorber unit (V2), a capacitance unit (C1), and a diode (D1) for returning power to the supply device (3) via an external down-converter.

7: (Currently Amended) ~~Electronic circuit topology (1) according to wherein the switching device (6) comprises a control unit (V3) for generating a pulse shaped signal, a switching unit (S1) for switching the current flowing through the primary side (TX1a) of the transformer device (4)~~ A circuit for driving a predominantly capacitive load, the circuit comprising:

a primary circuit;

a secondary circuit connected to the predominantly capacitive load; and

a transformer device with a primary side and a secondary side connecting the primary circuit with the secondary circuit,

wherein the primary circuit comprises:

a source device supplying power via the transformer device for operating the predominantly capacitive load,

a drain device or absorbing at least a part of said power, which is reflected back from the predominantly capacitive load during operation,

a switch for switching a current on the primary side of the transformer

device, and

\_\_\_\_\_ a diode-unit (D2) reverse connected across the switch so as to conduct a reverse current through the primary side of the transformer when the switch is turned off,

\_\_\_\_\_ wherein the transformer device is of a transformer type with a gap for transforming an input voltage-current-signal on the primary side to an output voltage-current-signal for supplying the predominantly capacitive load on the secondary side,

\_\_\_\_\_ wherein the source device is in serial connection with the transformer device, the drain device, and the switching device, and

\_\_\_\_\_ wherein the transformer device comprises means for forming a resonant tank circuit with the predominantly capacitive load.

8. (Canceled)

9. (Currently Amended) ~~Electronic circuit topology (1) according to~~ The circuit of claim 1, wherein the predominantly capacitive load (2) ~~is realized by~~ comprises at least one gas discharge lamp based on a dielectric barrier discharge lamp (La1) for generating light waves, preferably UV-light waves.

10. (Currently Amended) ~~Electronic circuit topology (1) according to~~ The circuit of claim [[1]]9, wherein the dielectric gas discharge lamp (La1) has a an operating power being preferably in the range from  $>0$  W to  $\leq 20,000$  W, more preferably from  $\geq 500$  W to  $\leq 10,000$  W, and most preferably from  $\geq 1,000$  W to  $\leq 5,000$  W, most preferably the power is about 3,000 W, and the discharge lamp produces light having a wave length preferably being in the range from  $\geq 100$  nm to  $\leq 380$  nm, more preferably from  $\geq 180$  nm to  $\leq 320$  nm, and most preferably from  $\geq 200$  nm to  $\leq 300$  nm.

11. (New) The circuit of claim 1, wherein the drain device comprises a power absorber unit, a capacitance unit, and a diode for returning power to the supply

device via an external down-converter.

12. (New) The circuit of claim 1, wherein the primary circuit further includes a diode reverse connected across the switch so as to conduct a reverse current through the primary side of the transformer.

13. (New) The circuit of claim 1, wherein the predominantly capacitive load comprises at least one dielectric barrier discharge lamp.

14. (New) The circuit of claim 6, wherein the switching device includes a switch, and a diode reverse connected across the switch so as to conduct a reverse current through the primary side of the transformer when the switch is turned off.

15. (New) The circuit of claim 6, wherein the switching device includes:  
a switch; and  
a periodic pulse generator connected to the switch and configured to apply a series of periodic pulses to the switch for periodically turning on the switch.

16. (New) The circuit of claim 6, wherein the predominantly capacitive load comprises at least one discharge lamp.

17. (New) The circuit of claim 6, wherein the predominantly capacitive load comprises at least one dielectric barrier discharge lamp.

18. (New) The circuit of claim 10, wherein the operating power is  $\geq 500$  W and  $\leq 20,000$  W.

19. (New) The circuit of claim 10, wherein the operating power is  $\geq 1000$  W and  $\leq 5,000$  W.

20. (New) The circuit of claim 10, wherein the wavelength is  $\geq 180$  nm to  $\leq 320$  nm.

21. (New) The circuit of claim 10, wherein the wavelength is  $\geq 200$  nm to  $\leq 300$  nm.